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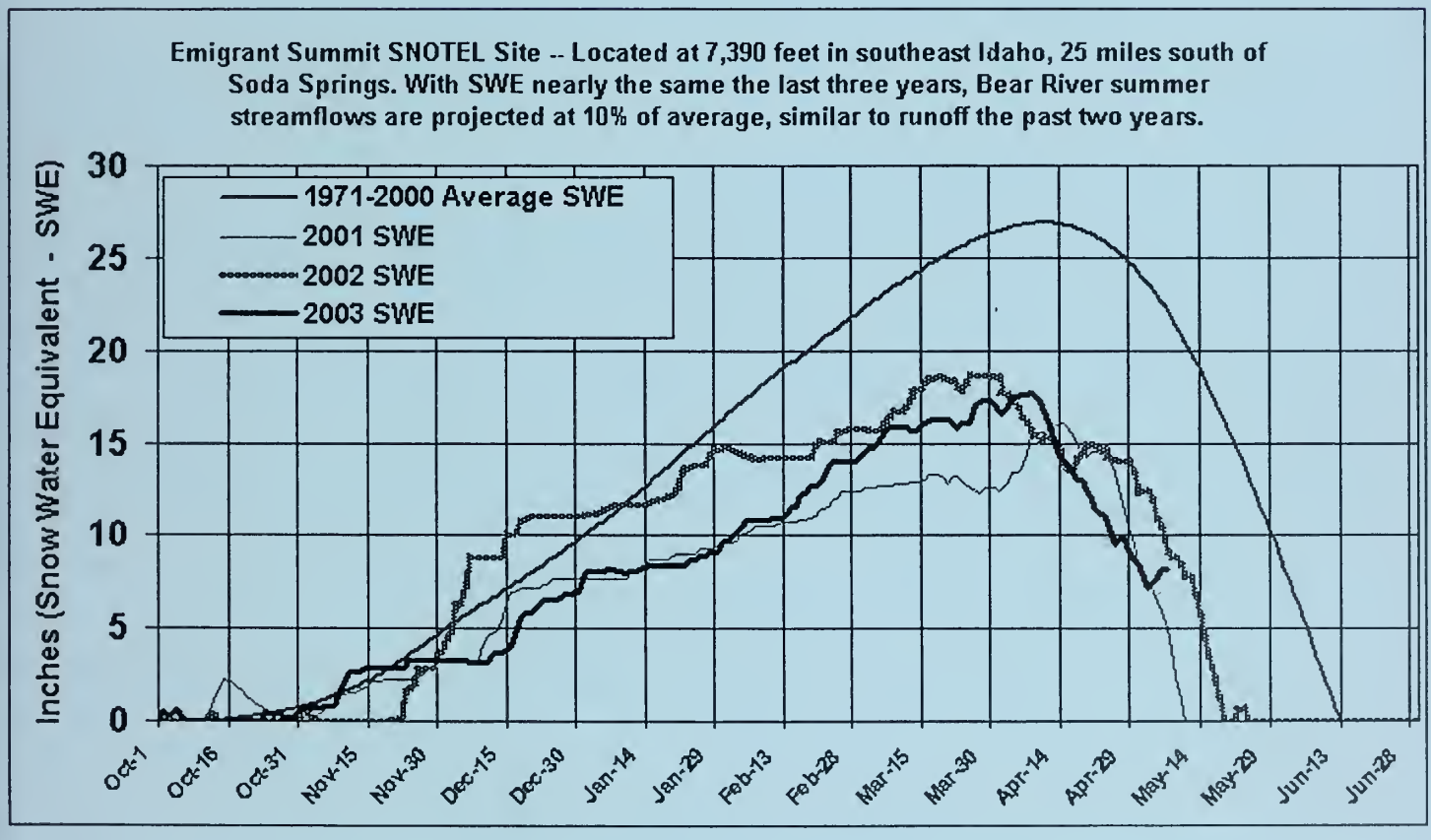
United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report May 1, 2003



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Water supply forecasts are produced in cooperation and coordination with the National Weather Service, NOAA

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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The Idaho Water Supply Outlook Report is available on the Internet at http://idsnow.id.nrcs.usda.gov/ and allows you to obtain the Water Supply Outlook Report several days before you receive it in the mail. Additional water supply products and most current snowpack information are also available on the Internet.

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[ ] #7 - Southside Snake River Basins

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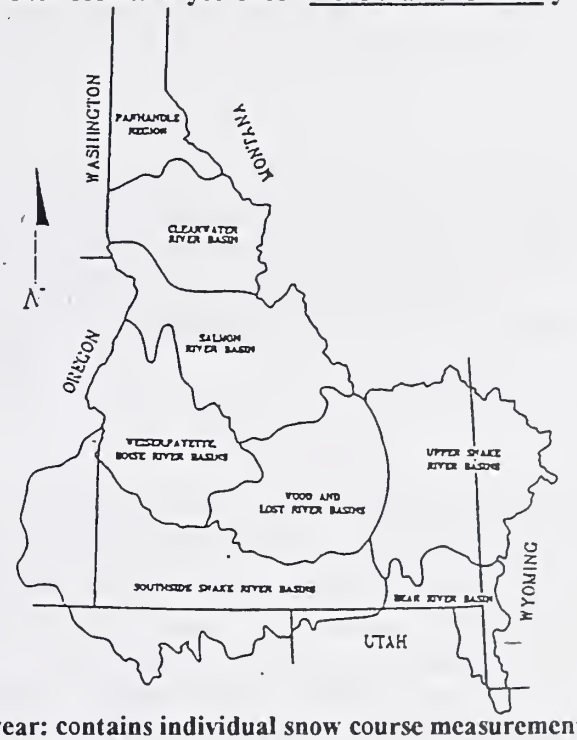

[ ] - Annual Data Summary Report - published after each water year: contains individual snow course measurements, snow water equivalent and precipitation data from SNOTEL (SNOw TELemetry) stations, and the 1971-2000 averages.

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IDAHO WATER SUPPLY OUTLOOK REPORT

May 1, 2003

SUMMARY

April precipitation varied across the state ranging from 50% of average in the Bear River to 170% in southern and central Idaho. This additional moisture allowed snow to continue accumulating in the higher elevations, thus improving the water supply outlook in the central and west-central basins. This spring precipitation will benefit rangeland conditions tremendously in southwest and south central Idaho, but only puts a small dent in the total surface water supply available in these southern basins. Streamflow forecasts range from slightly above average in the Clearwater basin to only 10% of average in the Bear River. Other low elevation drainages across the state and the high desert streams of southern Idaho are forecast at only 40% of average or less. The interesting snowmelt scenario for this year is how the lack of low snow and soil moisture deficit in parts of the state will affect the efficiency of the snowpack to produce streamflow, or if the recent rains have satisfied the soil's needs. In addition, the April precipitation was above average in the more populated valleys, but not representative of the moisture at the higher elevations that produce the majority of Idaho's spring and summer streamflow.

Irrigated agricultural shortages are expected in the Big Wood, Big Lost, Little Lost, Blackfoot, Owyhee, Salmon Falls, Oakley and Bear river basins. Irrigation shortages will occur in parts of the upper Snake basin; how severe depends on your water right and source in these basins. Additional spring precipitation will add to the runoff, improve snowpack efficiency in producing streamflow, reduce irrigation demand, and extend the limited amount of surface water available for the coming irrigation season.

SNOWPACK

The cool, wet weather in April is just what was needed to keep adding to the snowpack and improve this summer's water supply outlook in parts of the state. Some SNOTEL sites are just now reaching their peak snow water content values for the year. The current snowpacks as a percent of average slowly increased to above average levels for May 1 and may appear inflated because of the additional increases in moisture, delayed melt, and gradual decrease in the average snow water content values in April. When compared to the seasonal snow water peaks that occur in early April, only the higher elevation SNOTEL sites have a net increase of more snow water. Mid-elevation snowpacks melted some and then gained the snow water back with the series of storms in April, while averages gradually decreased during the month.

Snowpacks are 100-115% of average in the Selway, Locsha, Salmon, Payette, Big Wood, Little Wood, Big Lost, and Birch-Medicine Lodge basins. The lowest snowpacks range from 0-50% of average in the lower elevations across the state: Rathdrum, Hayden Lake, Coeur d'Alene, Palouse, Camas (Fairfield), Willow, Blackfoot, Portneuf, Oakley, and the Bear River. Elsewhere, basins range 75-95% of average for most basins.

The following table helps explain the snow water content when used as a percent of average for current day (May 6, 2003, first column) and when comparing the highest snow water content amount for the current year to average seasonal snow water content (second column). The peak snow water equivalent for the current year occurred between mid-February and early May.

BASIN	Snow Water Equivalent Percent of Average For May 6, 2003	2003 Peak Snow Water Equivalent As a Percent of Seasonal Snow Water Peak*
IDAHO PANHANDLE REGION	83	81
CLEARWATER BASIN	107	98
SALMON BASIN	125	105
WEISER BASIN	121	86
PAYETTE BASIN	124	100
BOISE BASIN	104	92
BIG WOOD BASIN	115	100
LITTLE WOOD BASIN	137	101
BIG LOST BASIN	116	99
LITTLE LOST, BIRCH BASINS	117	92
MEDICINE LODGE, BEAVER, CAMAS BASINS	91	83
HENRYS FORK, TETON BASINS	94	87
SNAKE BASIN ABOVE PALISADES	84	93
WILLOW, BLACKFOOT, PORTNEUF BASINS	25	71
OAKLEY BASIN	69	56
SALMON FALLS BASIN	94	71
BRUNEAU BASIN	106	78
OWYHEE BASIN	79	65
BEAR RIVER BASIN	43	72

* Seasonal Snow Water Peak is the maximum snow water equivalent value of the daily averages.

PRECIPITATION

April brought much needed above average precipitation to central, southwest, and south-central Idaho in the 125-175% of average range, but did little to help the drought plagued Bear River basin. Bear River basin April precipitation was only half of average and has only received above average precipitation three months since October 2001. April precipitation was about 80% of average in the Panhandle Region, Clearwater, and upper Snake basins. The above average spring precipitation across southern and central Idaho will provide a tremendous boost for rangeland vegetation and benefit irrigated agriculture by improving the soil moisture, reducing irrigation demand, and stretching the limited water supply later into the summer. Water year to date precipitation amounts are average in the Clearwater and Salmon basins; 95% in the central basins; 85% in the Panhandle, upper Snake and Southside basins; and 76% in the Bear basin. When compared to last year at this time, only the Salmon and central Idaho basins have received more precipitation than last year.

RESERVOIRS

Reservoir storage varies across the state with above average storage in western and northern Idaho and nearly empty reservoirs across southern Idaho. The exception in northern Idaho is Coeur D'Alene Lake at 64% of average. Shoshone County has been a dry spot all winter and also hosts the lowest streamflow forecasts in northern Idaho at 70-75% of average. Flood control releases are currently being made from Dworshak and Cascade reservoirs. Brownlee, Little Wood, Grassy Lake and Montpelier reservoirs are the bright spots across southern Idaho and are reporting above average May 1 storage. The lowest storage ranges from 25-50% of average (from poor to better): Salmon Falls, Owyhee, Blackfoot, Magic, Bear Lake, Oakley, and Wildhorse in northern Nevada. Combined April 30 reservoir storage for Magic and Mackay reservoirs is the 3rd lowest since 1935. Combined April 30 reservoir storage for Owyhee, Salmon Falls, Oakley and Bear Lake is the lowest since 1936.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report.

STREAMFLOW

Streamflow forecasts increased from a month ago across central Idaho as a result of the above average precipitation and where a majority of snow still remains above 6,000 feet. Most northern and central Idaho streams are forecast in the 85-105% of average, except the lower elevation streams of Coeur D'Alene, St. Joe, Mores (Idaho City), Camas (Fairfield), Big Wood below Magic Dam and Little Lost basins. The highest projected streamflow forecasts in the upper Snake basin range from a high of 81% of average for the Snake River above Jackson Lake to only 55% for the Salt River. The Snake River near Heise is forecast at 76% of average. The Henrys Fork forecasts call for 67% of average at Ashton and decreasing to 45% near Rexburg, partially due to the numerous diversions. The Portneuf River is forecast at 31% of average, while Willow and Blackfoot basins are only predicted to yield flows in the 24% of average range. American Falls Reservoir is forecast at 55% of average. Conditions south of the Snake River (from west to east): Owyhee River is forecast at 23% of average, Bruneau River and Salmon Falls Creek at 39%, Oakley Reservoir inflow at 29%. The lowest in the state is the Bear River at only 10% of its May-September average. This forecast is basically the same as the runoff for the past two seasons.

RECREATION

April precipitation improved conditions for whitewater rafting across central Idaho. The Salmon River is now forecast at 99% of average, and flows should be better than last year. Selway and Lochsa rivers are forecast at 108% of average. Payette River near Horseshoe Bend is forecast at 95% of average. The high desert rivers are forecast at about 30% of average. As of early May, the relationships between snowmelt and streamflow peaks indicate there is still the potential for higher flows in the Bruneau and Salmon Falls basins. Additional rain will provide more runoff to increase streamflows, but there is not much snow to sustain the flows, so peak flows may be of short duration without additional moisture inputs. The magnitude and duration of the snowmelt streamflow peaks for other streams in the state will depend upon spring precipitation and temperatures during the snowmelt season.

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of May 1, 2003

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

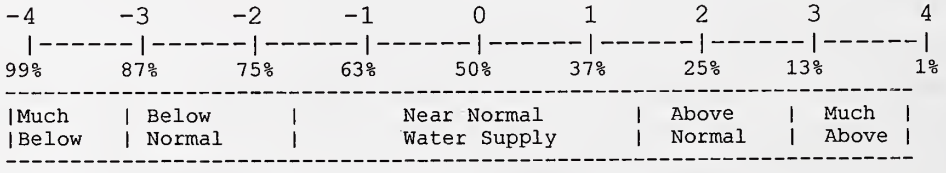
SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US National Weather Service
US Bureau of Reclamation
Idaho Water Users Association
US Army Corps of Engineers
Idaho Dept. of Water Resources
PacifiCorp

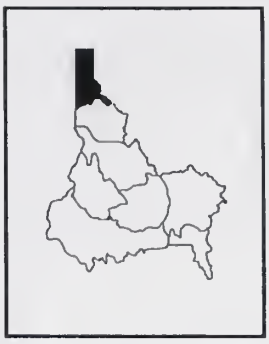
BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-2.4	1989/95	NA
CLEARWATER	1.4	1993	NA
SALMON	0.5	1986	NA
WEISER	-0.1	1986	NA
PAYETTE	-0.3	1981	NA
BOISE	-1.4	2000	-2.6
BIG WOOD	-2.4	2002	-1.4
LITTLE WOOD	-0.3	1996	-2.6
BIG LOST	-0.7	1985	-0.8
LITTLE LOST	-3.0	1992/88	0.0
HENRYS FORK	-2.0	1990/91	-3.3
SNAKE (HEISE)	-2.7	1994/87	-2.3
OAKLEY	-3.2	1990	0.0
SALMON FALLS	-3.3	2001	0.0
BRUNEAU	-2.9	2000	NA
BEAR RIVER	-3.9	2002	-3.8

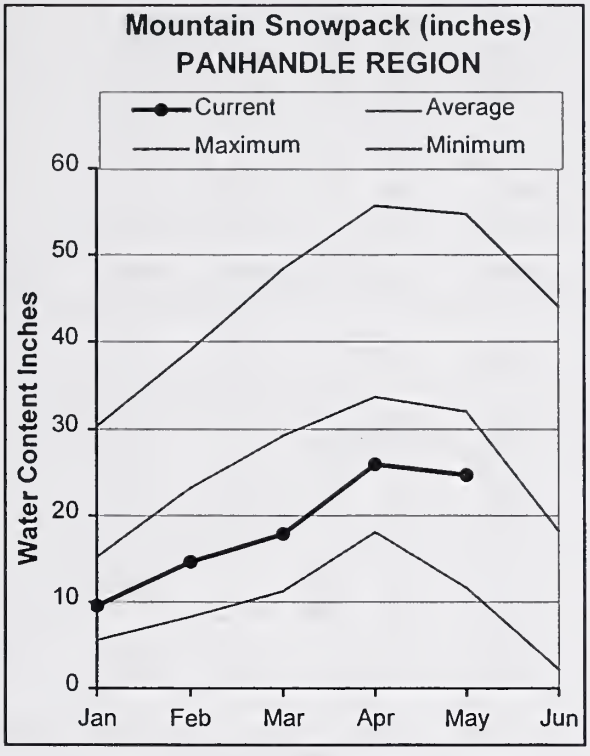
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

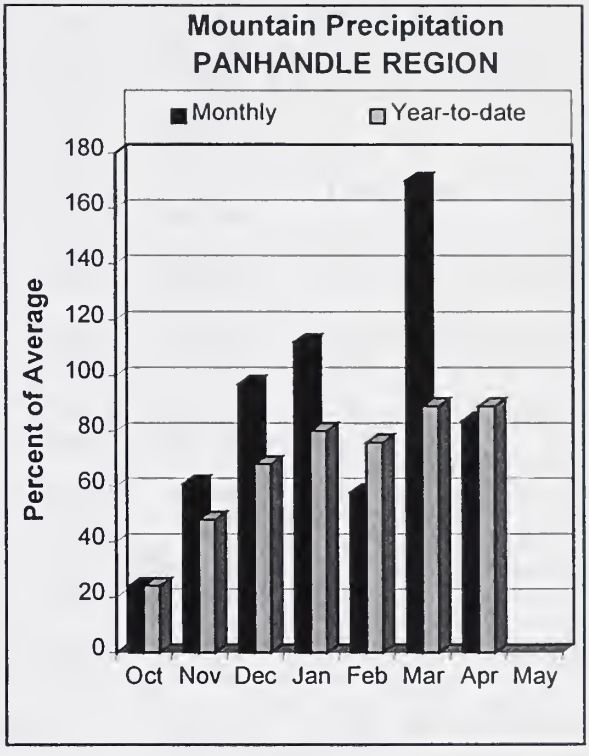


Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.

PANHANDLE REGION
MAY 1, 2003







WATER SUPPLY OUTLOOK

April brought precipitation that was 84% of average. Water year to date precipitation is 89% of average. Last year it stood at 117% of average at this time. The Panhandle Region snowpack as a whole is 77% of average, about 2/3s of last year's. Low elevation snow has melted. Mid-elevation snow is melting, while higher elevation sites such as Bear Mountain just reached its peak snow water content in late April. The Kootenai basin snowpack is 83% of average, Pend Oreille basin is 89%, and the Spokane basin is 58%, less than half of last year's. The lakes and reservoirs in the Panhandle Region are reporting above average storage with the exception of Coeur D'Alene Lake at 64% of average. Shoshone County has been a dry spot all winter and will see streamflows in the 70-75% of average range for St. Joe, Coeur d'Alene and Spokane rivers. Elsewhere in the Panhandle Region, the streams and major rivers coming into the state are forecast at 80-95% of average. Water supplies should be adequate, but with below average snow levels, users can expect below average stream levels, by mid-summer especially if spring and summer precipitation is below average.

PANHANDLE REGION
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	MAY-JUL	4310	4830	5070	85	5310	5830	6000
	MAY-SEP	5120	5700	5970	84	6240	6820	7090
MOYIE RIVER at Eastport	MAY-JUL	265	290	310	94	330	355	330
	MAY-SEP	275	305	325	94	345	375	345
SMITH CREEK	MAY-JUL	67	78	85	82	92	103	104
	MAY-SEP	70	83	91	82	99	112	111
BOUNDARY CREEK	MAY-JUL	73	82	89	87	96	105	102
	MAY-SEP	77	87	94	87	101	111	108
CLARK FK at Whitehorse Rpds (1,2)	MAY-JUL	6150	7390	7960	83	8530	9770	9586
	MAY-SEP	6940	8330	8960	84	9590	10980	10710
PEND OREILLE Lake Inflow (2)	MAY-JUL	7480	8380	8990	85	9600	10500	10600
	MAY-SEP	8320	9320	10000	85	10680	11680	11800
PRIEST near Priest River (1,2)	MAY-JUL	430	505	540	88	575	650	616
	MAY-SEP	450	545	585	87	625	720	670
COEUR D'ALENE at Enaville	MAY-JUL	201	270	320	73	370	440	439
	MAY-SEP	225	300	350	73	400	475	479
ST. JOE at Calder	MAY-JUL	490	575	630	75	685	770	843
	MAY-SEP	540	625	685	75	745	830	911
SPOKANE near Post Falls (2)	MAY-JUL	820	1050	1210	72	1365	1605	1673
	MAY-SEP	870	1115	1280	72	1450	1690	1771
SPOKANE at Long Lake (2)	MAY-JUL	980	1250	1430	75	1610	1880	1905
	MAY-SEP	1130	1410	1600	75	1790	2070	2126

PANHANDLE REGION
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2668.0	2472.0	1954.8
FLATHEAD LAKE	1791.0	1206.0	817.3	931.9
NOXON RAPIDS	335.0	319.7	316.2	272.3
PEND OREILLE	1561.3	925.5	865.4	916.7
COEUR D'ALENE	238.5	159.9	273.5	249.7
PRIEST LAKE	119.3	104.1	96.0	102.5

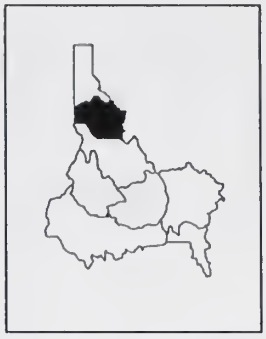
PANHANDLE REGION
Watershed Snowpack Analysis - May 1, 2003

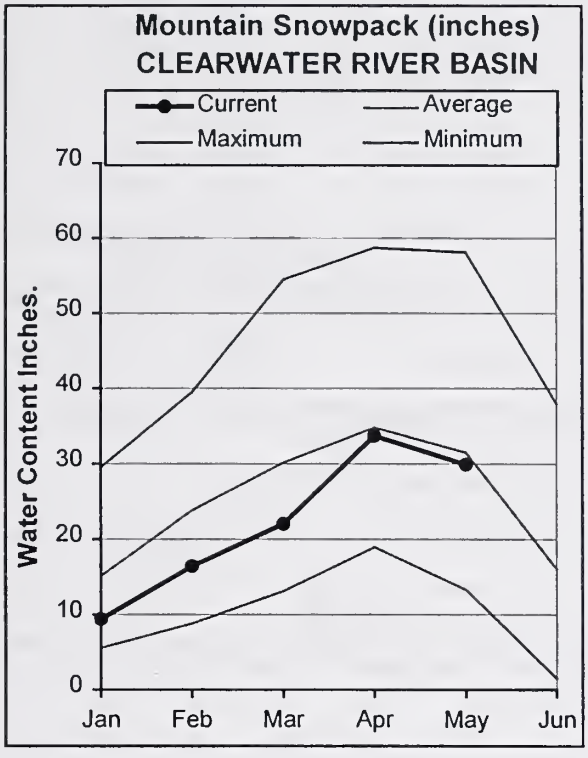
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	31	72	83
Moyie River	11	82	83
Priest River	4	88	88
Pend Oreille River	90	78	89
Rathdrum Creek	1	39	47
Hayden Lake	0	0	0
Coeur d'Alene River	6	39	54
St. Joe River	4	55	75
Spokane River	9	43	58
Palouse River	1	0	0

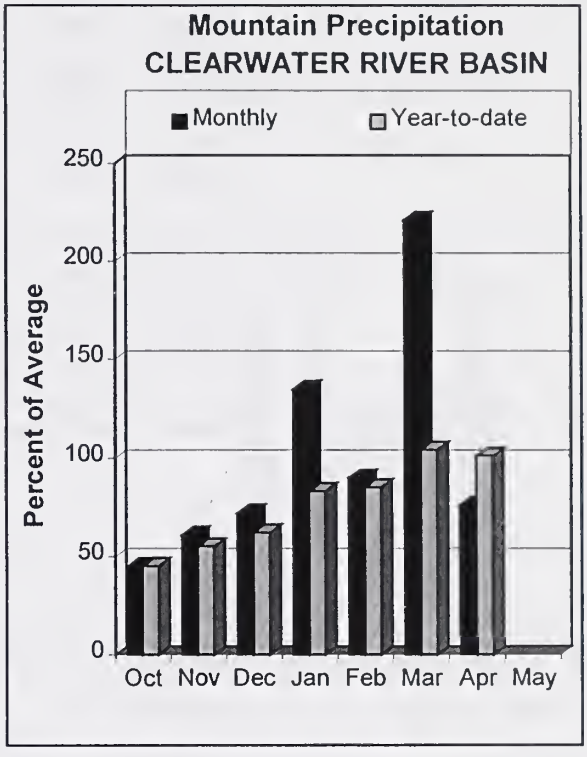
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

CLEARWATER RIVER BASIN
MAY 1, 2003







WATER SUPPLY OUTLOOK

Precipitation in April was 76% of average and is average for the water year starting October 1, 2002. The snow water content is now greater than last year in the Selway basin, slightly less than last year in the Lochsa basin, and about 3/4s of last year in the North Fork Clearwater basin. The Selway basin snowpack is 111% of average, Lochsa basin snowpack is 108%, while the North Fork Clearwater basin snow is 92% of average. Overall, the Clearwater River snowpack is 96% of average; last year it was 119% of average on May 1. Dworshak Reservoir is 84% full, 121% of average. Streamflow forecasts call for 110% of average for the Selway River and 107% for the Lochsa River. Dworshak Reservoir Inflow is forecast at 82% of average, while the Clearwater River near Spalding is forecast at 98% of average. Spring precipitation and temperatures during the snowmelt period will determine magnitude and duration of the high flow season, as there is always that chance of higher flows with an average snowpack or better. Water supplies should be adequate for the numerous users in the basin.

CLEARWATER RIVER BASIN

Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SELWAY near Lowell	MAY-JUL	1660	1800	1890	110	1980	2120	1723
	MAY-SEP	1740	1890	1990	109	2090	2240	1831
LOCHSA near Lowell	MAY-JUL	1200	1280	1340	107	1400	1480	1254
DWORSHAK RESV INFLOW (1,2)	MAY-JUL	1150	1470	1620	82	1770	2090	1968
	MAY-SEP	1270	1610	1760	83	1910	2250	2132
CLEARWATER at Orofino (1)	MAY-JUL	3250	3680	3880	104	4080	4510	3733
	MAY-SEP	3450	3920	4140	104	4360	4830	3987
CLEARWATER at Spalding (1,2)	MAY-JUL	4600	5340	5680	98	6020	6760	5773
	MAY-SEP	4970	5770	6130	99	6490	7290	6188

CLEARWATER RIVER BASIN

Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2926.7	2156.2	2421.3

CLEARWATER RIVER BASIN

Watershed Snowpack Analysis - May 1, 2003

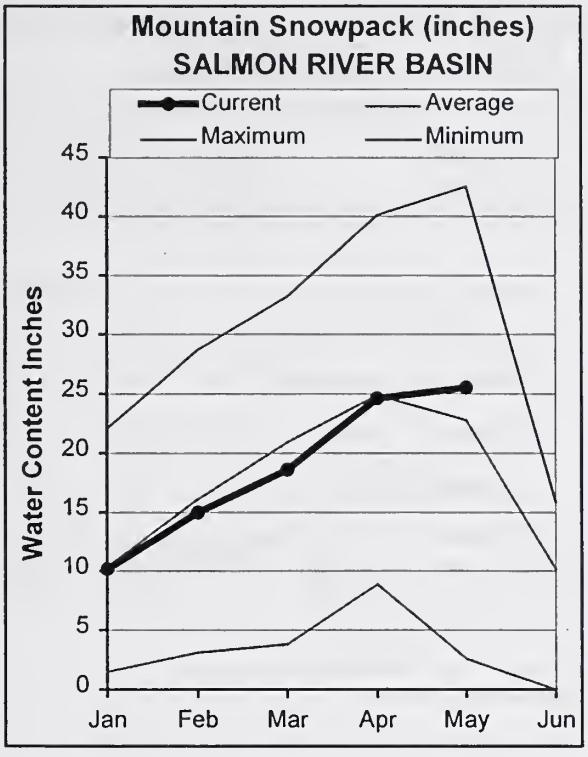
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	73	92
Lochsa River	2	94	108
Selway River	4	110	111
Clearwater Basin Total	15	80	96

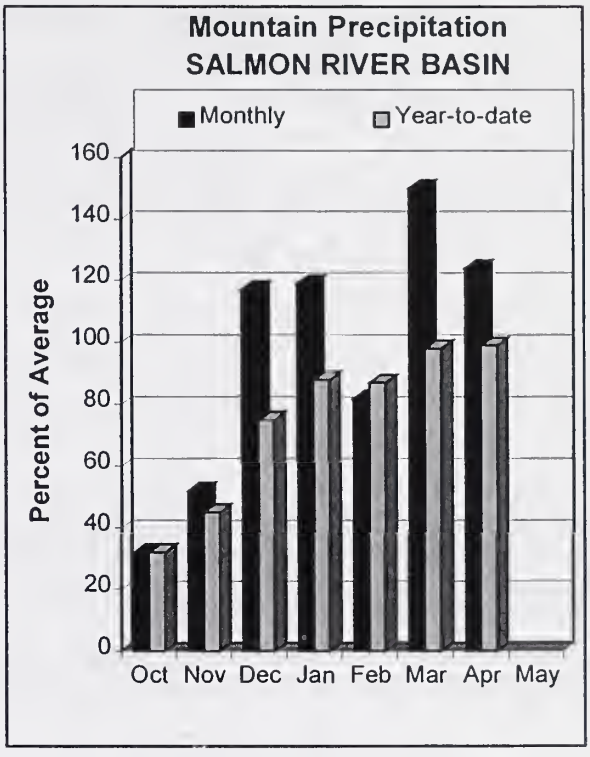
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SALMON RIVER BASIN
MAY 1, 2003





WATER SUPPLY OUTLOOK

April precipitation ranged from 100-180% of average for the 22 SNOTEL sites in and adjacent to the Salmon River basin. Overall, precipitation was 124% of average and is average for the water year. The Salmon Basin snowpack is 110% of average, one of the highest in the state. The Middle Fork Salmon River snowpack is 105% of average, better than last year at this time. The increase in percent of average values are a result of the cool wet weather keeping the snow from melting while snow water content averages started decreasing in April. Streamflow forecasts call for near average volumes for the summer. The Salmon River above Salmon is forecast at 94% of average; the Salmon River at White Bird is forecast at 99% of average. The interesting snowmelt scenario for this year is how the lack of low snow and soil moisture deficit will affect the efficiency of the snowpack to produce streamflow. Additional spring precipitation will add to the runoff, improve snowpack efficiency in producing streamflow, and keep flows higher later in the summer.

SALMON RIVER BASIN
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	MAY-JUL	592	675	715	94	755	840	759
	MAY-SEP	712	805	850	94	895	990	902
SALMON at White Bird (1)	MAY-JUL	4300	4830	5070	99	5310	5840	5146
	MAY-SEP	4820	5420	5690	99	5960	6560	5778

SALMON RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN
Watershed Snowpack Analysis - May 1, 2003

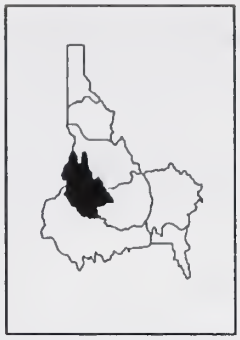
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	8	138	105
Lemhi River	7	147	102
Middle Fork Salmon River	3	132	105
South Fork Salmon River	3	121	104
Little Salmon River	4	120	130
Salmon Basin Total	24	130	110

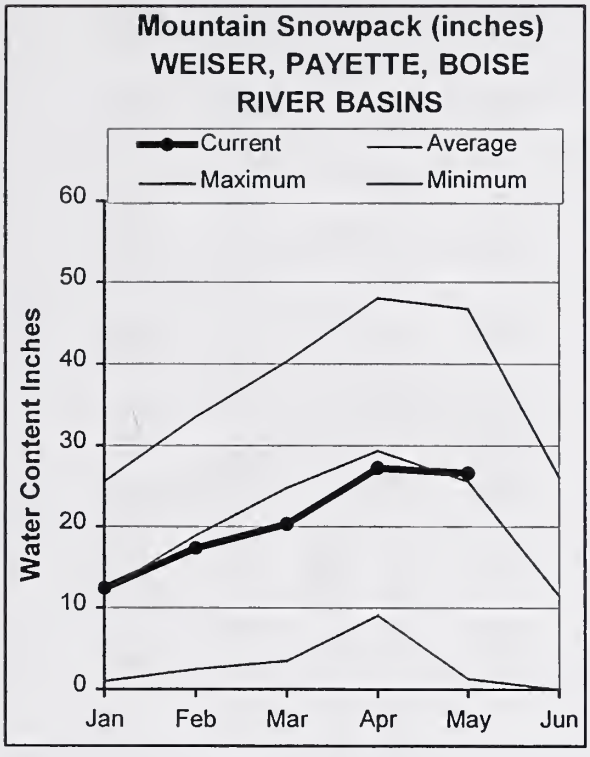
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

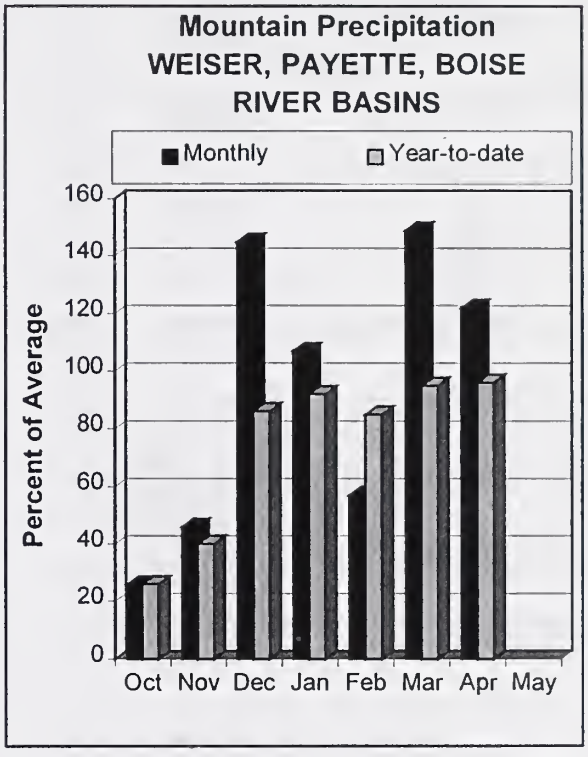
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS
MAY 1, 2003







WATER SUPPLY OUTLOOK

April precipitation was 122% of average in these west central mountains and ranged from near average to 160%. Several storms during April brought cool temperatures, allowing snow to fall in the higher elevations and rain in the valleys. Water year to date precipitation is now 96% of average for the water year that started October 1, same as last year at this time. Snowpack percentages as a percent of average inched up during April as a result of delayed snowmelt and because the averages gradually start decreasing in April. May 1 snowpacks are 114% of average for the North Fork Payette, 107% for the Weiser and Payette basins. The Boise basin snowpack is 90% of average, slightly more than last year. The Payette Reservoir system, at 73% full, 110% of average, is in good shape as flood control releases are now being made. The Boise reservoir system is 62% of capacity, 91% of average, slightly less than a year ago. The Boise River near Boise is forecast at 87% of average and should provide adequate irrigation supplies. The Payette River near Horseshoe Bend is forecast at 95% of average and will provide adequate irrigation and good river running flows. The spring rains improved the outlook on the Weiser River and increased the forecast to 92% of average for the May-July period. The cool wet weather will help provide adequate irrigation supplies in these basins.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WEISER near Weiser (1)	MAY-JUL	132	205	235	92	265	340	256
	MAY-SEP	151	225	260	91	295	370	285
SF PAYETTE at Lowman	MAY-JUL	290	315	330	87	345	370	379
	MAY-SEP	330	355	375	86	395	420	435
DEADWOOD RESERVOIR Inflow (1,2)	MAY-JUL	92	107	114	98	121	136	116
	MAY-SEP	99	115	122	98	129	145	125
LAKE FORK PAYETTE near McCall	MAY-JUL	68	74	78	103	82	88	76
	MAY-SEP	72	78	82	104	86	92	79
NF PAYETTE at Cascade (1,2)	MAY-JUL	285	350	380	96	410	475	396
	MAY-SEP	315	390	420	96	450	525	436
NF PAYETTE nr Banks (2)	MAY-JUL	370	435	475	94	515	580	504
	MAY-SEP	405	475	520	94	565	635	551
PAYETTE nr Horseshoe Bend (1,2)	MAY-JUL	980	1140	1220	95	1300	1460	1286
	MAY-SEP	1090	1280	1360	95	1440	1630	1429
BOISE near Twin Springs (1)	MAY-JUL	360	420	445	87	470	530	509
	MAY-SEP	395	460	490	87	520	585	563
SF BOISE at Anderson Ranch Dam (1,2)	MAY-JUL	280	345	375	88	405	470	428
	MAY-SEP	310	380	410	88	440	510	465
MORES CREEK near Arrowrock Dam	MAY-JUL	36	47	55	70	63	74	79
	MAY-SEP	39	51	59	69	67	79	85
BOISE near Boise (1,2)	MAY-JUL	740	880	945	87	1005	1155	1082
	MAY-SEP	820	970	1040	87	1110	1260	1194

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	11.1	11.2	10.5
CASCADE	693.2	545.8	457.9	462.5
DEADWOOD	164.0	78.9	68.7	103.4
ANDERSON RANCH	450.2	208.4	175.9	302.3
ARROWROCK	272.2	207.3	262.2	180.9
LUCKY PEAK	293.2	211.0	240.1	207.9
LAKE LOWELL (DEER FLAT)	165.2	116.9	108.4	141.5

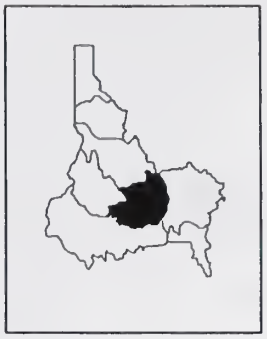
WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - May 1, 2003

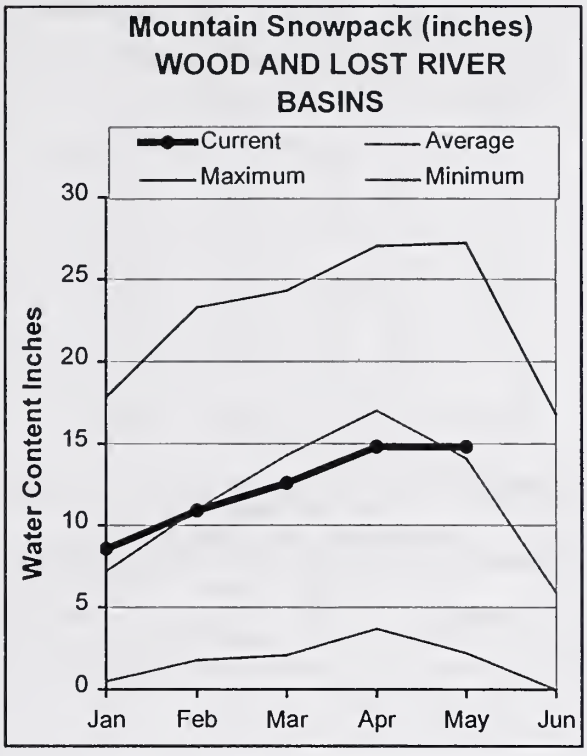
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	66	70
Weiser River	3	99	108
North Fork Payette	8	117	114
South Fork Payette	5	118	100
Payette Basin Total	14	115	107
Middle & North Fork Boise	5	108	91
South Fork Boise River	7	118	95
Mores Creek	4	83	79
Boise Basin Total	13	107	90
Canyon Creek	1	0	0

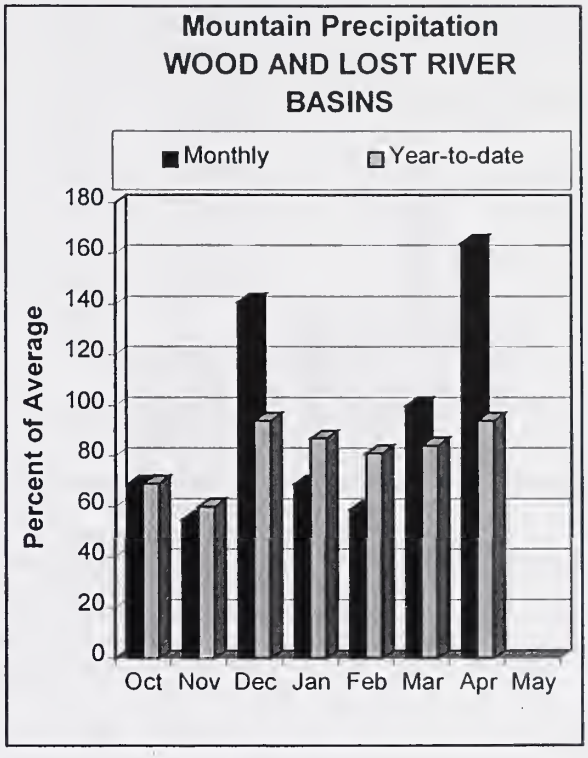
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

WOOD and LOST RIVER BASINS
MAY 1, 2003







WATER SUPPLY OUTLOOK

April precipitation was 164% of average, 2nd highest in the state. Amounts ranged from 120% of average in Camas Creek to over 200% in the Big Lost basin. The snow has melted in Camas Creek and the peak snowmelt streamflow occurred on March 15 at 360 cfs, almost a month before its long term average peak of 800 cfs. Snowpacks from high to low are: 117% of average in the Little Wood, 111% in Big Lost, 107% in Big Wood, 104% in Birch and Medicine Lodge, 90% in Little Lost, and only 34% in Camas basins. With the below average amount of runoff from Camas Creek into Magic Reservoir in April, the reservoir only increased to 30% of capacity from 19% a month ago. Little Wood Reservoir is 89% of capacity, 110% of average. Mackay Reservoir is 54% of capacity, 69% of average. These reservoirs are all storing less water than last year at this time. Combined April 30 reservoir storage for Magic and Mackay reservoirs is the 3rd lowest since 1935 with only 1991 and 1992 having less water in storage. Streamflow forecasts are for 69% of average for Magic Reservoir inflow, 81% for Little Wood River, and 85% for Mackay Reservoir inflow. However, users may wish to use a lesser forecast exceedance volume due to accumulative drought effects, dry soils, springs, etc., especially in the Big Lost basin, as reservoir levels remain low due to lack of winter recharge from low spring flows. Agricultural irrigation shortages are expected for Magic and Mackay reservoir water users and for users in the Little Lost basins. Little Wood water users should have adequate supplies.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<== Drier == Future Conditions == Wetter ==>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD at Hailey (1)	MAY-JUL	120	157	175	78	194	241	225
	MAY-SEP	138	179	200	78	222	274	258
BIG WOOD near Bellevue	MAY-JUL	70	97	119	73	143	181	163
	MAY-SEP	77	106	128	73	152	191	176
CAMAS CREEK near Blaine	MAY-JUL	7.2	13.7	19.4	45	26	38	43
	MAY-SEP	7.6	14.3	20	46	27	38	44
BIG WOOD below Magic Dam (2)	MAY-JUL	68	112	142	69	172	217	205
	MAY-SEP	75	121	152	69	182	227	220
LITTLE WOOD near Carey (2)	MAY-JUL	32	43	50	81	57	68	62
	MAY-SEP	37	49	57	81	65	77	70
BIG LOST at Howell Ranch	MAY-JUL	117	131	141	87	151	165	162
	MAY-SEP	134	151	162	87	173	190	186
BIG LOST below Mackay Reservoir (2)	MAY-JUL	86	100	110	85	120	134	130
	MAY-SEP	111	127	137	85	147	163	161
LITTLE LOST blw Wet Creek	MAY-JUL	9.0	13.1	15.9	59	18.2	23	27
	MAY-SEP	11.1	16.0	20	57	24	29	35

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	57.6	80.7	150.4
LITTLE WOOD	30.0	26.7	27.2	24.3
MACKAY	44.4	23.9	27.4	34.6

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - May 1, 2003

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	7	139	107
Camas Creek	3	116	34
Big Wood Basin Total	10	138	100
Fish Creek	0	0	0
Little Wood River	5	156	117
Big Lost River	5	157	111
Little Lost River	3	154	90
Birch-Medicine Lodge Cree	2	131	104
Camas-Beaver Creeks	2	99	78

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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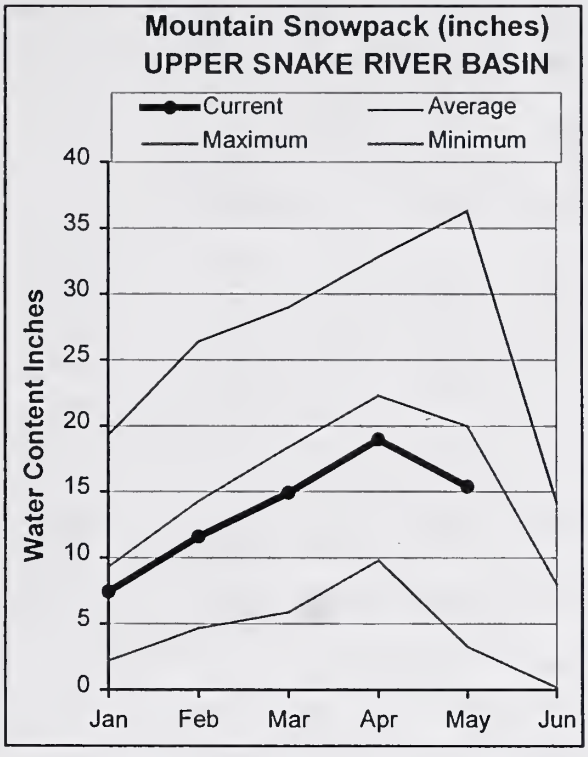
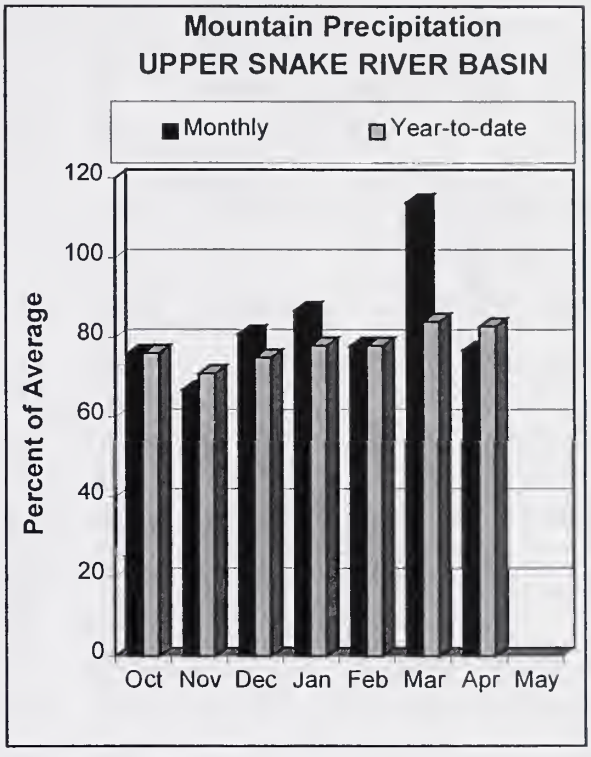
UPPER SNAKE RIVER BASIN
MAY 1, 2003





WATER SUPPLY OUTLOOK

April precipitation varied across the upper Snake basin and ranged from 105% of average in the Henrys Fork; 66% in the Willow, Blackfoot and Portneuf basins; and half of average in the Snake basin above Palisades Reservoir. Overall, precipitation in April was 77% of average and stands at 83% for the water year, slightly less than last year. As a result of the below average precipitation, snowpack percentages decreased from a month ago. The snowpack in the Henrys Fork is 77% of average, slightly less than last year and is 85% for the Snake above Jackson Lake. The snow in the low elevation Willow, Blackfoot and Portneuf basins has nearly melted and is much less than a year ago. Overall, the snowpack for the Snake basin above American Falls is 70% of average, 91% of last year. Combined reservoir storage in Palisades Reservoir and Jackson Lake is 1,102,100 acre-feet, 49% of capacity. The Snake River near Heise for the May-September period is forecast at 76% of average, 2,870,000 acre-feet. Water supplies will be tight but should be better than last year. American Falls Reservoir is storing 1,324,800 acre-feet; inflow is forecast at 1,590,000 acre-feet for May-September. Blackfoot Reservoir is 26% of capacity, 36% of average, and has nearly 50,000 acre-feet less than last year. Projected inflow is for only 23% of average for the May-June period. Portneuf River is currently at record low levels for this time of year and forecast at only 31% of average. Irrigation shortages will occur in parts of the upper Snake basin; how severe depends on your water right and source in these basins. Above normal spring precipitation is needed to reduce irrigation demand and extend the limited amount of surface water available for the coming irrigation season.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<== Drier == Future Conditions == Wetter ==>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK near Ashton (2)	MAY-JUL	225	270	300	67	330	375	451
	MAY-SEP	335	390	425	66	460	515	643
HENRYS FORK near Rexburg (2)	MAY-JUL	420	525	595	45	665	770	1327
	MAY-SEP	595	715	795	45	875	990	1781
FALLS near Squirrel (1,2)	MAY-JUL	174	219	240	71	260	305	339
	MAY-SEP	223	270	290	71	310	355	409
TETON near Driggs	MAY-JUL	75	90	100	70	110	125	143
	MAY-SEP	99	118	130	69	142	161	188
TETON near St. Anthony	MAY-JUL	199	230	250	70	270	300	355
	MAY-SEP	250	285	310	71	335	370	435
SNAKE near Moran (1,2)	MAY-SEP	565	650	690	82	730	815	842
PACIFIC CREEK at Moran	MAY-SEP	108	125	136	81	147	164	167
SNAKE above Palisades (2)	MAY-JUL	1560	1680	1760	81	1840	1960	2165
	MAY-SEP	1810	1950	2050	81	2150	2290	2530
GREYS above Palisades	MAY-JUL	159	180	195	65	210	230	298
	MAY-SEP	190	215	230	65	245	270	354
SALT near Etna	MAY-JUL	98	132	155	55	178	212	281
	MAY-SEP	136	174	199	56	226	261	358
PALISADES RESERVOIR INFLOW (1,2)	MAY-JUL	1900	2170	2300	77	2430	2700	2980
	MAY-SEP	2250	2570	2710	77	2850	3170	3524
SNAKE near Heise (2)	MAY-JUL	2080	2280	2420	76	2560	2760	3166
	MAY-SEP	2480	2710	2870	76	3030	3260	3764
WILLOW CREEK nr Ririe (2)	MAY-JUL	8.0	11.7	14.6	24	17.8	23	60
BLACKFOOT RESV INFLOW	MAY-JUN	16.2	18.5	20	23	30	46	86
SNAKE nr Blackfoot (1,2)	MAY-JUL	2310	2770	2970	72	3170	3630	4128
	MAY-SEP	3130	3590	3790	72	3990	4450	5277
PORTNEUF at Topaz	MAY-JUL	8.0	15.2	20	31	25	32	65
	MAY-SEP	17.0	22	26	31	30	35	84
AMERICAN FALLS RESV INFLOW (1,2)	MAY-JUL	495	1140	1440	55	1740	2390	2643
	MAY-SEP	645	1290	1590	55	1890	2540	2906

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	75.5	60.9	87.4
ISLAND PARK	135.2	114.1	128.7	123.2
GRASSY LAKE	15.2	13.3	10.3	12.7
JACKSON LAKE	847.0	342.7	216.6	471.1
PALISADES	1400.0	759.4	749.1	862.6
RIRIE	80.5	45.7	41.9	56.2
BLACKFOOT	348.7	91.6	138.5	256.3
AMERICAN FALLS	1672.6	1324.8	1454.1	1493.8

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - May 1, 2003

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	10	90	76
Teton River	8	103	78
Henrys Fork above Rexburg	18	95	77
Snake above Jackson Lake	6	102	85
Gros Ventre River	3	88	79
Hoback River	6	86	67
Greys River	5	100	77
Salt River	5	92	58
Snake above Palisades	25	97	75
Willow Creek	7	89	44
Blackfoot River	3	47	3
Portneuf River	6	30	24
Snake abv American Falls	44	91	70

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.
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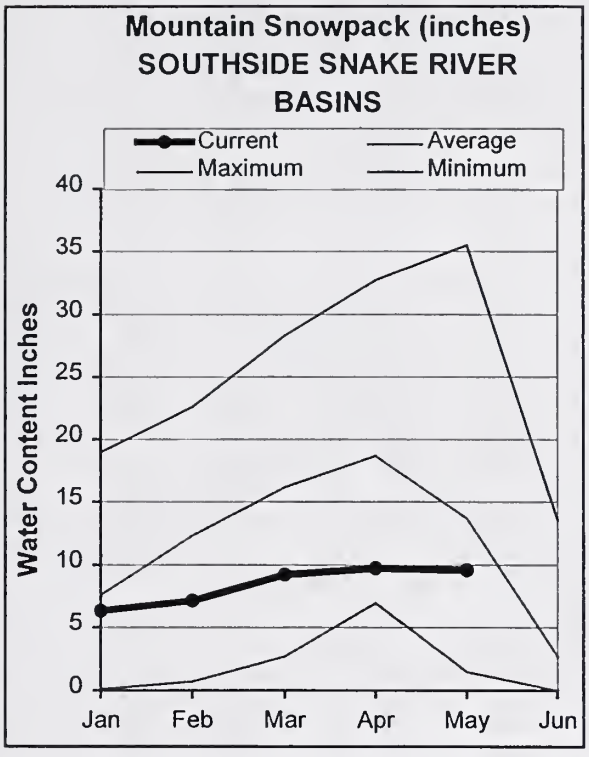
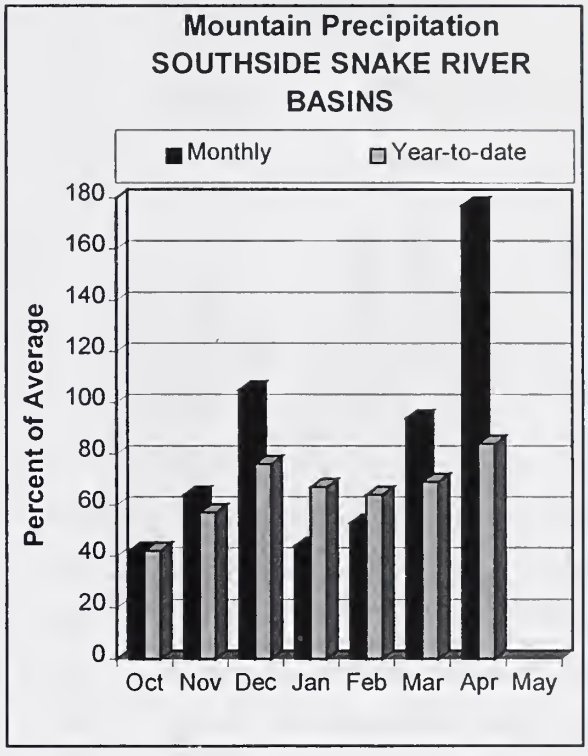
SOUTHSIDE SNAKE RIVER BASINS
MAY 1, 2003





WATER SUPPLY OUTLOOK

After three consecutive months with below average precipitation, these basins south of the Snake River finally received above normal precipitation, but not enough to put a dent in the total water supply for the coming irrigation season. April precipitation was 177% of average, highest in the state! Actual precipitation amounts ranged from 1.8 to 7 inches, while April averages range from 1.5 to 4 inches. Magic Mountain SNOTEL site received 5.1 inches, the largest monthly precipitation amount since December 2001 when 7.5 inches fell. This spring precipitation will provide a tremendous boost for the rangeland, which has also felt the accumulative drought impacts the past three years. Cool temperatures and additional moisture maintained the remaining snow at the higher elevation SNOTEL sites. May 1 snowpack, as a percent of average from east to west are: 65% in Raft, 50% in Oakley, 80% in Salmon Falls, 87% in Bruneau, and 64% in the Owyhee basins. As of early May, the relationships between snowmelt and streamflow peaks indicate that there is still the potential for higher flows in the Bruneau and Salmon Falls basins. Additional rain will provide even more runoff to increase streamflows, but there is not much snow to sustain the flows; so peak flows may be of short duration without additional moisture inputs. The accumulative drought, dry soils and wet land areas, low springs, etc., will provide an interesting snowmelt runoff scenario as to how much water soaks into the ground or if the recent rains have satisfied the soil's needs. More rain in May is needed to further improve the drought picture in these high desert basins. Streamflow forecasts are for 39% of average for the Salmon Falls Creek and the Bruneau River. Oakley Reservoir inflowis forecast at 29% of average while the Owyhee Reservoir inflow is forecast at 21%. Combined April 30 reservoir storage for Owyhee, Salmon Falls, Oakley and Bear Lake is the lowest since 1936. Irrigation agricultural shortages are expected in these southern Idaho basins and possibly worse than the 2001 drought year in the Salmon Falls and Oakley basins.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESV INFLOW	MAY-JUL	2.9	4.6	6.0	29	7.6	10.3	21
	MAY-SEP	3.5	5.3	6.8	28	8.5	11.3	24
OAKLEY RESV STORAGE	MAY-31	12.6	15.5	17.4	39	19.1	22	45
	JUN-30	3.6	8.1	11.2	28	14.3	18.9	40
SALMON FALLS CREEK nr San Jacinto	MAY-JUL	12.2	17.7	22	39	27	35	57
	MAY-SEP	13.8	19.5	24	39	29	37	62
SALMON FALLS RESV STORAGE	MAY-31	15.0	21	26	26	31	37	101
	JUL-31	10.1	12.4	14.0	20	22	33	70
BRUNEAU near Hot Spring	MAY-JUL	33	50	63	39	78	102	162
	MAY-SEP	36	53	67	39	82	108	172
OWYHEE near Gold Creek (2)	MAY-JUL	1.0	3.4	5.8	42	8.9	14.6	13.8
OWYHEE nr Owyhee (2)	MAY-JUL	7.2	11.7	14.8	30	25	41	50
OWYHEE near Rome	MAY-JUL	11.0	29	47	22	69	108	210
OWYHEE RESV INFLOW (2)	MAY-JUL	19.0	41	60	23	83	125	256
	MAY-SEP	24	47	67	30	91	132	226
SUCCOR CK nr Jordan Valley	MAY-JUL	0.76	1.50	2.00	28	3.80	6.40	7.10
SNAKE RIVER at King Hill (1,2)	MAY-JUL	486	1094	1370	67	1645	2255	2038
SNAKE RIVER near Murphy (1,2)	MAY-JUL	435	1078	1370	66	1660	2305	2077
SNAKE RIVER at Weiser (1,2)	MAY-JUL	703	1781	2270	60	2760	3840	3793
SNAKE RIVER at Hells Canyon Dam (1,2	MAY-JUL	930	2127	2670	62	3215	4410	4276
SNAKE blw Lower Granite Dam (1,2)	MAY-JUL	11310	13572	14600	86	15630	17890	16940
	MAY-SEP	12995	15612	16800	86	17990	20600	19650

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	74.5	19.1	23.3	41.0
SALMON FALLS	182.6	24.6	38.1	87.9
WILDHORSE RESERVOIR	71.5	26.8	38.1	55.8
OWYHEE	715.0	214.8	435.3	613.6
BROWNLEE	1419.3	1285.4	1219.3	1069.2

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - May 1, 2003

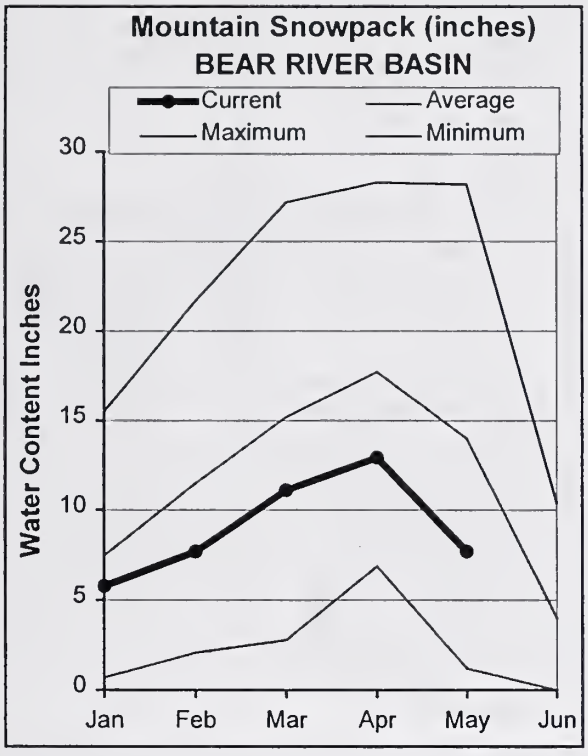
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	67	65
Goose-Trapper Creeks	4	57	50
Salmon Falls Creek	7	91	80
Bruneau River	5	105	87
Owyhee Basin Total	7	141	64

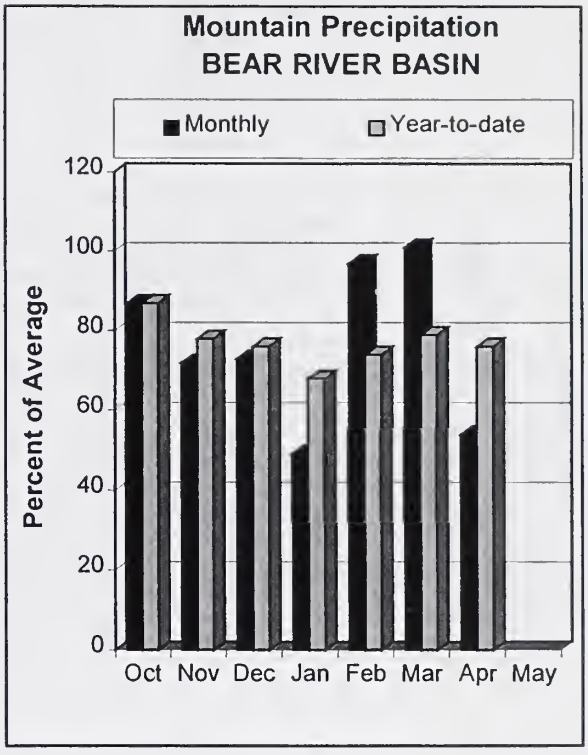
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

BEAR RIVER BASIN
MAY 1, 2003





WATER SUPPLY OUTLOOK

April precipitation missed the Bear River basin that brought some drought relief to most of southern and southwestern Idaho. April precipitation was 135% of average in the Oakley basin but decreased to 54% of average for the Bear River basin as a whole, lowest in the state. Only 3 months since October 2001 have seen above average precipitation in the Bear River basin. Water year to date precipitation is 76% of average, slightly less than last year. The remaining snow in the Bear River basin is about half of average. Bear Lake is storing 396,700 acre-feet, 28% of capacity, 41% of average, 230,000 acre-feet less than last year. This is the 3rd lowest April 30 storage since 1936. Only 1936 and 1993 had less in storage on April 30 than this year. Some streams in the Bear River area are at or near record low levels when they should be peaking for the year. The Bear River below Stewart Dam forecast decreased to a meager 9% of average for the May-September period. This is basically the same as the observed flow for the past two seasons. Water users should be prepared for the third consecutive year with nearly non-existent snowmelt runoff and less storage water available than last year, resulting in possibly the tightest water supply yet unless spring and summer rains occur.

BEAR RIVER BASIN
Streamflow Forecasts - May 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear R nr UT-WY State Line	APR-SEP	56	63	66	53	70	75	125
	MAY-SEP	51	55	58	49	61	66	119
Woodruff Narrows Res inflow	APR-SEP	17.0	26	34	24	43	58	142
	MAY-SEP	12.0	21	28	23	37	51	122
Smiths Fork nr Border	MAY-JUL	29	33	37	40	41	48	92
	MAY-SEP	35	40	44	40	48	56	109
Bear River blw Stewart Dam	MAY-JUL	15.0	19.0	22	10	51	95	225
	MAY-SEP	16.0	20	23	9	57	108	264

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	396.7	627.1	971.0
MONTPELIER CREEK	4.0	2.9	1.7	2.5

BEAR RIVER BASIN
Watershed Snowpack Analysis - May 1, 2003

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	4	93	73
Bear River ab WY-ID line	13	83	49
Montpelier Creek	2	116	73
Mink Creek	1	69	35
Cub River	1	101	65
Bear River ab ID-UT line	20	84	49
Malad River	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and inter-basin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report. (Revised 12/2000).

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)
BOUNDARY CREEK NEAR PORTHILL, ID – No Corrections
MOYIE RIVER AT EASTPORT, ID – No Corrections
SMITH CREEK NEAR PORTHILL, ID – No Corrections
CLARK FORK AT WHITEHORSE RAPIDS, ID
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)
PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE
+ PEND OREILLE LAKE (STORAGE CHANGE)
+ PRIEST LAKE (STORAGE CHANGE)
PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)
COEUR D'ALENE R AT ENAVILLE, ID - No Corrections
ST. JOE R AT CALDER, ID - No Corrections
SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
SPOKANE R AT LONG LAKE, WA
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
+ LONG LAKE, WA (STORAGE CHANGE)

Clearwater River Basin

DWORSHAK RESERVOIR INFLOW, ID
+ DWORSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID
+ CLEARWATER R NR PECK, ID
LOCHSA RIVER NR LOWELL - No Corrections
SELWAY RIVER NR LOWELL - No Corrections
CLEARWATER R AT OROFINO, ID - No Corrections
CLEARWATER R AT SPALDING, ID
+ DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

SALMON R AT SALMON, ID - No Corrections
SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections
SF PAYETTE R AT LOWMAN, ID - No Corrections
DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)
LAKE FORK PAYETTE RIVER NR MCCALL, ID – No Corrections
NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)
NF PAYETTE R NR BANKS, ID
+ CASCADE RESV (STORAGE CHANGE)
PAYETTE R NR HORSESHOE BEND, ID
+ DEADWOOD RESV (STORAGE CHANGE)
+ CASCADE RESV (STORAGE CHANGE)
BOISE R NR TWIN SPRINGS, ID - No Corrections
SF BOISE R AT ANDERSON RANCH DAM, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
BOISE R NR BOISE, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
+ ARROWROCK RESV (STORAGE CHANGE)
+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections
BIG WOOD R NR BELLEVUE, ID - No Corrections
CAMAS CREEK NEAR BLAINE – No Corrections
BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
+ MAGIC RESV (STORAGE CHANGE)
LITTLE WOOD R NR CAREY, ID
+ LITTLE WOOD RESV (STORAGE CHANGE)
BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections
BIG LOST R BLW MACKAY RESV NR MACKAY, ID
+ MACKAY RESV (STORAGE CHANGE)
LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections

Upper Snake River Basin

HENRYS FORK NR ASHTON, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
HENRYS FORK NR REXBURG, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID
+ GRASSY LAKE (STORAGE CHANGE)
FALLS R ABV YELLOWSTONE CANAL NR SQUIRREL, ID
+ GRASSY LAKE (STORAGE CHANGE)
TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections
TETON R NR ST. ANTHONY, ID
- CROSS CUT CANAL
+ SUM OF DIVERSIONS ABV GAGE
SNAKE R NR MORAN, WY
+ JACKSON LAKE (STORAGE CHANGE)
PALISADES RESERVOIR INFLOW, ID
+ SNAKE R NR IRWIN, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

SNAKE R NR HEISE, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

BLACKFOOT RESVERVOIR INFLOW, ID
+ BLACKFOOT RIVER
+ BLACKFOOT RESERVOIR (STORAGE CHANGE
SNAKE R NR BLACKFOOT, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID
PORTNEUF R AT TOPAZ, ID - No Corrections
AMERICAN FALLS RESERVOIR INFLOW, ID
+ SNAKE RIVER AT NEELEY
+ ALL CORRECTIONS MADE FOR HENRYS FK NR REXBURG, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT GAGES

Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID
+ GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
+ TRAPPER CK NR OAKLEY, ID
SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
BRUNEAU R NR HOT SPRINGS, ID - No Corrections
OWYHEE R NR GOLD CK, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR OWYHEE, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR ROME, OR – No Corrections
OWYHEE RESERVOIR INFLOW, OR
+ OWYHEE R BLW OWYHEE DAM, OR
+ OWYHEE RESV (STORAGE CHANGE)
+ DIV TO NORTH AND SOUTH CANALS
SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
SNAKE R - KING HILL, ID - No Corrections
SNAKE R NR MURPHY, ID - No Corrections
SNAKE R AT WEISER, ID - No Corrections
SNAKE R AT HELLS CANYON DAM, ID
+ BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

BEAR R NR RANDOLPH, UT
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
SMITHS FORK NR BORDER, WY - No Corrections
THOMAS FORK NR WY-ID STATELINE - No Corrections (Disc)
BEAR R BLW STEWART DAM, ID
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
+ DINGLE INLET CANAL
+ RAINBOW INLET CANAL
MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID (Disc)
+ MONTPELIER CK RESV (STORAGE CHANGE)
CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS (Units in 1,000 acre-feet, KAF)
Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. This table lists these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. (Revised January 2002)

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS CAPACITY INCLUDES
PANHANDLE REGION						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1971.0	ACTIVE
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD+INACTIVE+ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE+ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD+INACTIVE+ACTIVE
CLEARWATER BASIN						
DWORSHAK	--	1452.00	2016.00	--	3468.0	INACTIVE+ACTIVE
WEISER/BOISE/PAYETTE BASINS						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	46.70	646.50	--	693.2	INACTIVE+ACTIVE
DEADWOOD	--	--	164.00	--	164.0	ACTIVE
ANDERSON RANCH	24.90	37.00	413.10	--	450.1	INACTIVE+ACTIVE
ARROWROCK	--	--	272.20	--	272.2	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE+ACTIVE
LAKE LOWELL	7.90	5.80	159.40	--	165.2	INACTIVE+ACTIVE
WOOD/LOST BASINS						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
UPPER SNAKE BASIN						
HENRYS LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE+SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD+INACTIVE+ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
SOUTHSIDE SNAKE BASINS						
OAKLEY	--	--	74.50	--	74.5	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE+ACTIVE
BEAR RIVER BASIN						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD+ACTIVE

Interpreting Streamflow Forecasts

Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflovv forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

Most Probable (50 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations, There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value.
There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value.
There is a 10 percent chance the streamflow volume will be less than this forecast value.

To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

10 Percent Chance of Exceeding Forecast. there is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts - an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Death between March I and July 31.

Using the Higher Exceedence Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three Out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF PAYETTE RIVER at Lowman	APR-JUL	329	414	471	109	528	613	432
	APR-SEP	369	459	521	107	583	673	488
BOISE RIVER near Twin Springs (1)	APR-JUL	443	610	685	109	760	927	631
	APR-SEP	495	670	750	109	830	1005	

For more information concerning streamflow forecasting ask your local NRCS field office for a copy of "A Field *Office Guide* for *Interpreting Streamflow Forecasts" or visit our Web page.*

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